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ABSTRACT

This paper examines research on the kinds of classroom questioning skills where the type and sequence of questions teachers ask has a significant impact on student response and on the language used in responding. Some of the studies considered indicate that teachers frequently ask low-level questions with no logical sequence; that the majority of questions are of a memory level; and that verbal response is impeded by a rapid questioning rate and lack of silence between questions. Other studies reveal that interpretative or reflective questioning encourages detailed verbal responses, as well as class interaction. The paper stresses the need for inservice programs that help teachers identify the type of classroom environment they desire and then assist them in developing the skills necessary to attain this environment. (HAI)

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Teachers' Classroom Questioning Skills

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on

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The asking of questions is so central to the act of teaching that the precise role these queries play is frequently overlooked. Teachers ask questions so automatically that they tend to view them as the product of an intuitive impulse which is simply developed with experience.

However, available research on teacher questioning behaviors tends to suggest that teachers have a penchant for asking low-level questions with no logical sequence. More than 50 years ago, Stevens (1912) found that in the 100 high school classes she visited two-thirds of the questions asked by teachers required direct recall of textbook information. From her sample, Stevens found that teachers ask 395 questions per day, and she hypothesized that four-fifths of the school day was spent in question and answer recitation. Later research conducted by Haynes (1935) lends further evidence to the factually-oriented nature of teachers' questioning, as he found that 77 percent of teachers' questions in sixth-grade history classes demanded only factual answers.

Of course, these two studies are quite dated. However, more recent research in this area reveals very little change. In viewing the classes of the "best" elementary teachers, Floyd (1968) reported that an extremely high percentage of the questions that teachers asked were of a memory level, and only 11 percent of the questions asked called for evaluation or comparison. These teachers also asked far more questions than their students, as the overall rate was 94:4. Likewise, teachers asked an average 3.5 questions per minute.

Hoetker (1968) found even higher questioning rates in his study of junior high school English teachers. The mean questioning rate during substantive talk was 5.17 questions per minute, or a teacher question every 11.8 seconds. In a low ability ninth grade class, the bombardment rate rose even higher to 10.7 questions per minute, or a question every 5.6 seconds. Hoetker also cites other research indicating that adults take an average of 14 seconds to respond to relatively simple relationship questions on analogy tests which require only a non-verbal response. Obviously students have little time to give due consideration to their answers when they are expected to deal with questions in such a rapid-fire manner.

Moreover, teachers allow very little time for silence after they ask a question. Row (1974) found that science teachers remain silent for only a single second after having asked a question and before they ask another question or give the answer to the question themselves. She also found that when teachers were trained to wait three to five seconds, student responses increase, and there is also an increase in student-to-student interaction.

The type and sequence of questions teachers ask do have a significant impact on the type of responses their students make as well as on the language used in responding. For example, Smith (1977) found that both second and fourth grade children make substantially longer average communication units in responding to interprative questions than to factual questions. In another study (Lucking, 1976), students made more responses of interpretation to their reading when their teachers were trained to ask hierarchically-arranged questions which stimulated

higher cognitive processes.

Well-developed questioning skills are particularly important for teachers dealing with disadvantaged children. In a recent comparative study of the language abilities of children from various socio-economic levels, Tough (1977) discovered that many of our assumptions about disadvantaged children may be quite fallacious. Tough found that although middle-class children tend to make longer, more elaborate verbal statements during their play, disadvantaged children were equally as capable of making similar responses. These children were not found to give explanation or justifications readily, but if questioned at length, they showed no lack of resources in language. The language difference between advantaged and disadvantaged was, indeed, one of habit, and effective teachers will have to develop the patience and questioning skills to involve such children in activities which requires greater and more frequent verbalizations.

Similarly, Simmons (1976) reported that the type of questions kindergarten teachers ask influences the verbal responses of disadvantaged children. In an examination of these children's responses to data recall, data processing, or application questions, Simmons found quite different responses to each type of question. Data processing and application questions resulted in a statistically significant increase in total word count and in mean length of T-units, and these questions resulted in a significant difference in the children's vocabulary diversity scores.

Employing specific questioning strategies also hold great potential for reading instruction. Baskin, Hoskisson, and Modlin (1976) compared a directed reading-thinking questioning technique to a reflective reading-thinking questioning approach with first grade children. Each child in the experiment was asked to retell a story read to them and then to retell the story again two weeks later. The reflective technique lead to a significant increase in the children's ability to recall characters, events, and plot than did the directed approach. The investigators hypothesized that the reflective questioning technique was more successful because it required the subjects to explore the story at a greater depth of meaning and to use factual information to explain their thinking.

However, acquiring appropriate and varied questioning skills is no small task. Each teacher has developed a given style of questioning, and any change in behavior will require a relearning or at least a refinement of what is carried out daily. A text still quite useful for teachers in classifying and producing questions at various levels of the Bloom Taxonomy is Norris Sanders' Classroom Questions: What Kinds? (1966). And a more recent text, Questioning Strategies and Techniques (1972), by Francis Hunkins offers a variety of other approaches to questioning which lead to greater student involvement.

Hunkins outlines a particularly useful sequential model of questioning which involves the work of Taba (1967) and Suchman (1966). This model suggests that questions first be developed at the lowest level of the Bloom Taxonomy with succeeding higher questions posed to students after they have accumulated a sufficient number of facts. Such a technique does not

demand that questions must fall at every level of the taxonomy, but it does suggest an orderliness and a logical progression.

In spite of a number of articles in professional journals and available books on improving questioning skills, present research still suggests that teachers can profit from focusing on these skills. Yet a variety of attitudinal factors may prohibit teachers from calling upon students for anything but brief, factual responses. Teachers may fear "losing control" if they are not assuming a major portion of the dialogue, and they may feel that too much time is lost on "foolishness" or wrong answers if class time is given largely to student talk. Such classroom procedures also place a major responsibility on students for their own learning, which is the major thrust of Hunkins' book Involving Students in Questioning (1976). However, many teachers may feel that youngsters are incapable of assuming this responsibility.

Proper preservice and inservice for teachers then must not only deal with past research and background information on questioning skills, but such training should also deal with teacher's attitudes about learning. The most effective pre-professional and professional training can be accomplished by helping teachers identify what kind of classroom environment they would like and then assist them in developing the skills necessary to develop this environment. Perhaps if our efforts were more coordinated and teacher training were more sensative to teachers' attitudes, one would be less likely to find who-dun-it, recitation-type classes reflected by current research.

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